

CLAIMS

What we claim is:

1. A system for remote manipulation of image data comprising:  
a telecommunications network;  
5 an image data storage library;  
an image processing server coupled to the telecommunications network

and further coupled to the image data storage library; and

10 a plurality of receiving stations coupled to the telecommunications network, each of the plurality of receiving stations having a memory for storing local copies of state parameters,

15 wherein at least one of the receiving stations transmits state parameters through the telecommunications network to the image processing server, and

wherein the image processing server receives image data from the image data storage library and processes the image data in accordance with the received state parameters, and

20 wherein the image processing server transmits processed image data through the telecommunications network to the receiving station.

2. The system of Claim 1 wherein at least one of the receiving stations transmits a request for processed image data through the telecommunications network and wherein the image processing server transmits processed image data to the receiving station through the telecommunications network in response to the request.

3. The system of Claim 1 wherein the image processing server transmits processed imaged data to at least one receiving station upon the completion of the processing of image data.

4. The system of Claim 1 wherein a first one of the plurality of receiving stations includes a user interface means for altering the local copy of state parameters and a means for transmitting the local copy of the state parameters, and wherein the first one of the plurality of receiving stations transmits a copy of the local copy of the state parameters through the telecommunications network to the image processing server.

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10 5. The system of Claim 1 wherein a first one of the plurality of receiving stations includes a user interface means for altering the local copy of state parameters and a means for transmitting the local copy of the state parameters, and wherein the first one of the plurality of receiving stations transmits a copy of the local copy of the state parameters through the telecommunications network to the image processing server and wherein at least one other of the plurality of receiving stations receives the state parameters through the telecommunications network from the image processing server and stores a local copy in the memory of the at least one other of the plurality of receiving stations.

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20 6. The system of Claim 4 wherein the at least one other receiving station transmits a request for processed image data through the telecommunications network and wherein the image processing server transmits processed image data to the receiving station through the telecommunications network in response to the request.

7. The system of Claim 4 wherein the image processing server transmits processed imaged data to the at least one other receiving station upon the completion of the processing of image data.

8. The system of Claim 4 further comprising means for authorizing only the first one of the plurality of receiving stations to alter and transmit the local copy of state parameters, and means for removing the authorization from the first one of the plurality of receiving stations and granting the authorization to another one of the plurality of receiving stations.

9. The system of Claim 1 further comprising a display means coupled to a user input device, the user input device including a means for manipulating the movement of a cursor displayed on the display means and a means for causing text and graphics to be displayed on the display means, wherein the state parameters include parameters indicating the location of the cursor on the display means and the location and content of text and graphics on the display means.

10. The system of Claim 1 wherein the image data are comprised of volumetric data.

11. A system for remote manipulation of image data comprising:  
15 a telecommunications network;  
an image data storage library;  
an image processing server coupled to the telecommunications network  
and further coupled to the image data storage library; and  
a plurality of receiving stations coupled to the telecommunications  
20 network;

wherein the image processing server includes a first memory for storing a server set of state parameters, a server-side machine-readable medium, and a server-side processor that executes a first program stored in the server-side

machine-readable medium, the first program causing the server-side processor to perform the steps of:

controlling the reception of an update set of state parameters over the telecommunications network;

5 controlling the determination of whether the received update set of state parameters differs from the server set of state parameters in a manner which requires new processing of the image data;

controlling the processing of image data according to the update set of state parameters;

10 controlling the transmission the update set of state parameters from the image processing server to the receiving stations; and

controlling the transmission of new image data from the image processing server to the receiving stations if the update set of state parameters required processing of image data at the image processing server; and

15 wherein the plurality of receiving stations include a second memory for storing a local set of state parameters, a client-side machine-readable medium, and a client-side processor that executes a second program stored in the client-side machine-readable medium, the second program causing the client-side processor to perform the steps of:

20 controlling the transmission of a request for new state parameters to the image processing server through the telecommunications network;

controlling the reception of state parameters from the image processing server over the telecommunications network;

controlling the determination of whether the received state parameters differ from the local set of state parameters and whether the received state parameters require non-local processing of image data; and

controlling the transmission of a request for updated image data from the receiving station to the image processing server if a determination is made in the determining step that the received state parameters require non-local processing of image data.

5        12. The system of Claim 11 wherein at least one of the plurality of receiving stations includes a user interface means for altering a set of state parameters stored in the memory and a transmission means coupled to the telecommunications network for transmitting the set of state parameters stored in the memory.

10      13. The system of Claim 11 wherein at least one of the receiving stations transmits a request for processed image data through the telecommunications network and wherein the image processing server transmits processed image data to the receiving station through the telecommunications network in response to the request.

15      14. The system of Claim 11 wherein the image processing server transmits processed imaged data to at least one receiving station upon the completion of the processing of image data.

15. A system for remote manipulation of image data comprising:  
a telecommunications network;  
a communications server coupled to the telecommunications network;  
a plurality of receiving stations, the receiving stations including a first  
5 memory for storing a local set of state parameters, a first client-side machine-  
readable medium containing a pre-stored set of image data, a second client-side  
machine-readable medium, and a client-side processor that executes a program  
stored in the second machine-readable medium, the program causing the  
processor to perform the steps of:  
10 controlling the transmission of a request for new state parameters to the  
communication server through the telecommunications network;  
controlling the reception of state parameters from the communications  
server over the telecommunications network;  
controlling the determination of whether the received state parameters  
15 differ from the local set of state parameters; and  
controlling the processing of the pre-stored image data based on the  
received state parameters;  
wherein the communications server includes a second memory for storing  
a server set of state parameters, a server-side machine-readable medium, and a  
20 server-side processor that executes a second program stored in the third machine-  
readable medium, the second program causing the second processor to perform  
the steps of:  
controlling the reception by the communications server of an update set of  
state parameters over the telecommunications network; and  
25 controlling the transmission the update set of state parameters from the  
communications server to the receiving stations.

16. The system of Claim 15 wherein at least one of the plurality of receiving stations includes a user interface means for altering a set of state parameters stored in the memory and a transmission means coupled to the telecommunications network for transmitting the set of state parameters stored in the memory.

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17. The system of Claim 15 wherein at least one of the receiving stations processes image data stored in the local memory according to the received set of state parameters.